



DEPARTMENT OF THE AIR FORCE  
59TH MEDICAL WING (AETC)  
JOINT BASE SAN ANTONIO - LACKLAND TEXAS



26 APR 2017

MEMORANDUM FOR SGVT

ATTN: LT COL JASON A. KELLY

FROM: 59 MDW/SGVU

SUBJECT: Professional Presentation Approval

1. Your paper, entitled **Case Report: Improved Homonymous Hemianopia with Hyperbaric Oxygen Therapy** presented at/published to **Undersea and Hyperbaric Medicine (Journal/Abstract); Undersea and Hyperbaric Medical Society Annual Scientific Meeting, Naples FL, 29 June – 2 July 2017** in accordance with MDWI 41-108, has been approved and assigned local file #**17182**.
2. Pertinent biographic information (name of author(s) title, etc.) has been entered into our computer file. Please advise us (by phone or mail) that your presentation was given. At that time, we will need the date (month, day and year) along with the location of your presentation. It is important to update this information so that we can provide quality support for you, your department, and the Medical Center commander. This information is used to document the scholarly activities of our professional staff and students, which is an essential component of Wilford Hall Ambulatory Surgical Center (WHASC) internship and residency programs.
3. Please know that if you are a Graduate Health Sciences Education student and your department has told you they cannot fund your publication, the 59th Clinical Research Division may pay for your basic journal publishing charges (to include costs for tables and black and white photos). We cannot pay for reprints. If you are a 59 MDW staff member, we can forward your request for funds to the designated Wing POC at the Chief Scientist's Office, Ms. Alice Houy, office phone: 210-292-8029; email address: [alice.houy.civ@mail.mil](mailto:alice.houy.civ@mail.mil).
4. Congratulations, and thank you for your efforts and time. Your contributions are vital to the medical mission. We look forward to assisting you in your future publication/presentation efforts.

*Linda Steel-Goodwin*

LINDA STEEL-GOODWIN, Col, USAF, BSC  
Director, Clinical Investigations & Research Support



## PROCESSING OF PROFESSIONAL MEDICAL RESEARCH/TECHNICAL PUBLICATIONS/PRESENTATIONS

### INSTRUCTIONS

USE ONLY THE MOST CURRENT 59 MDW FORM 3039 LOCATED ON AF E-PUBLISHING

1. The author must complete page two of this form:
  - a. In Section 2, add the funding source for your study [e.g., 59 MDW CRD Graduate Health Sciences Education (GHSE) (SG5 O&M); SG5 R&D; Tri-Service Nursing Research Program (TSNRP); Defense Medical Research & Development Program (DMRDP); NIH; Congressionally Directed Medical Research Program (CDMRP); Grants; etc.]
  - b. In Section 2, there may be funding available for journal costs, if your department is not paying for figures, tables or photographs for your publication. Please state "YES" or "NO" in Section 2 of the form, if you need publication funding support.
2. Print your name, rank/grade, sign and date the form in the author's signature block or use an electronic signature.
3. Attach a copy of the 59 MDW IRB or IACUC approval letter for the research related study. If this is a technical publication/presentation, state the type (e.g. case report, QA/QI study, program evaluation study, informational report/briefing, etc.) in the "Protocol Title" box.
4. Attach a copy of your abstract, paper, poster and other supporting documentation.
5. Save and forward, via email, the processing form and all supporting documentation to your unit commander, program director or immediate supervisor for review/approval.
6. On page 2, have either your unit commander, program director or immediate supervisor:
  - a. Print their name, rank/grade, title; sign and date the form in the approving authority's signature block or use an electronic signature.
7. Submit your completed form and all supporting documentation to the CRD for processing (59crdpubspres@us.af.mil). This should be accomplished no later than 30 days before final clearance is required to publish/present your materials. If you have any questions or concerns, please contact the 59 CRD/Publications and Presentations Section at 292-7141 for assistance.
8. The 59 CRD/Publications and Presentations Section will route the request form to clinical investigations, 502 ISG/JAC (Ethics Review) and Public Affairs (59 MDWPA) for review and then forward you a final letter of approval or disapproval.
9. Once your manuscript, poster or presentation has been approved for a one-time public release, you may proceed with your publication or presentation submission activities, as stated on this form. Note: For each new release of medical research or technical information as a publication/presentation, a new 59 MDW Form 3039 must be submitted for review and approval.
10. If your manuscript is accepted for scientific publication, please contact the 59 CRD/Publications and Presentations Section at 292-7141. This information is reported to the 59 MDWCC. All medical research or technical information publications/presentations must be reported to the Defense Technical Information Center (DTIC). See 59 MDWI 41-108, Presentation and Publication of Medical and Technical Papers, for additional information.
11. The Joint Ethics Regulation (JER) DoD 5500.07-R, Standards of Conduct, provides standards of ethical conduct for all DoD personnel and their interactions with other non-DoD entities, organizations, societies, conferences, etc. Part of the Form 3039 review and approval process includes a legal ethics review to address any potential conflicts related to DoD personnel participating in non-DoD sponsored conferences, professional meetings, publication/presentation disclosures to domestic and foreign audiences, DoD personnel accepting non-DoD contributions, awards, honoraria, gifts, etc. The specific circumstances for your presentation will determine whether a legal review is necessary. If you (as the author) or your supervisor check "NO" in block 17 of the Form 3039, your research or technical documents will not be forwarded to the 502 ISG/JAC legal office for an ethics review. To assist you in making this decision about whether to request a legal review, the following examples are provided as a guideline:

For presentations before professional societies and like organizations, the 59 MDW Public Affairs Office (PAO) will provide the needed review to ensure proper disclaimers are included and the subject matter of the presentation does not create any cause for DoD concern.

If the sponsor of a conference or meeting is a DoD entity, an ethics review of your presentation is not required, since the DoD entity is responsible to obtain all approvals for the event.

If the sponsor of a conference or meeting is a non-DoD commercial entity or an entity seeking to do business with the government, then your presentation should have an ethics review.

If your travel is being paid for (in whole or in part) by a non-Federal entity (someone other than the government), a legal ethics review is needed. These requests for legal review should come through the 59 MDW Gifts and Grants Office to 502 ISG/JAC.

If you are receiving an honorarium or payment for speaking, a legal ethics review is required.

If you (as the author) or your supervisor check "YES" in block 17 of the Form 3039, your research or technical documents will be forwarded simultaneously to the 502 ISG/JAC legal office and PAO for review to help reduce turn-around time. If you have any questions regarding legal reviews, please contact the legal office at (210) 671-5795/3365, DSN 473.

NOTE: All abstracts, papers, posters, etc., should contain the following disclaimer statement:

*"The views expressed are those of the [author(s)] [presenter(s)] and do not reflect the official views or policy of the Department of Defense or its Components"*

NOTE: All abstracts, papers, posters, etc., should contain the following disclaimer statement for research involving humans:

*"The voluntary, fully informed consent of the subjects used in this research was obtained as required by 32 CFR 219 and DODI 3216.02\_AFI 40-402."*

NOTE: All abstracts, papers, posters, etc., should contain the following disclaimer statement for research involving animals, as required by AFMAN 40-401\_IP:

*"The experiments reported herein were conducted according to the principles set forth in the National Institute of Health Publication No. 80-23, Guide for the Care and Use of Laboratory Animals and the Animal Welfare Act of 1966, as amended."*



PROCESSING OF PROFESSIONAL MEDICAL RESEARCH/TECHNICAL PUBLICATIONS/PRESENTATIONS			
1. TO: CLINICAL RESEARCH	2. FROM: (Author's Name, Rank, Grade, Office Symbol) JASON A. KELLY, Lt Col, 59 TRS	3. GME/GHSE STUDENT: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	4. PROTOCOL NUMBER:
5. PROTOCOL TITLE: (NOTE: For each new release of medical research or technical information as a publication/presentation, a new 59 MDW Form 3039 must be submitted for review and approval.)			
6. TITLE OF MATERIAL TO BE PUBLISHED OR PRESENTED: Case Report: Improved Homonymous Hemianopia with Hyperbaric Oxygen Therapy			
7. FUNDING RECEIVED FOR THIS STUDY? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO FUNDING SOURCE:			
8. DO YOU NEED FUNDING SUPPORT FOR PUBLICATION PURPOSES: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
9. IS THIS MATERIAL CLASSIFIED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
10. IS THIS MATERIAL SUBJECT TO ANY LEGAL RESTRICTIONS FOR PUBLICATION OR PRESENTATION THROUGH A COLLABORATIVE RESEARCH AND DEVELOPMENT AGREEMENT (CRADA), MATERIAL TRANSFER AGREEMENT (MTA), INTELLECTUAL PROPERTY RIGHTS AGREEMENT ETC.? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO NOTE: If the answer is YES then attach a copy of the Agreement to the Publications/Presentations Request Form.			
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<input checked="" type="checkbox"/> 11a. PUBLICATION/JOURNAL (List intended publication/journal.) Undersea and Hyperbaric Medicine			
<input checked="" type="checkbox"/> 11b. PUBLISHED ABSTRACT (List intended journal.) Undersea and Hyperbaric Medicine			
<input checked="" type="checkbox"/> 11c. POSTER (To be demonstrated at meeting: name of meeting, city, state, and date of meeting.) Undersea and Hyperbaric Medical Society Annual Scientific Meeting, Naples, FL, 29 Jun-2 Jul 2017			
<input type="checkbox"/> 11d. PLATFORM PRESENTATION (At civilian institutions: name of meeting, state, and date of meeting.)			
<input type="checkbox"/> 11e. OTHER (Describe: name of meeting, city, state, and date of meeting.)			
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13. EXPECTED DATE WHEN YOU WILL NEED THE CRD TO SUBMIT YOUR CLEARED PRESENTATION/PUBLICATION TO DTIC NOTE: All publications/presentations are required to be placed in the Defense Technical Information Center (DTIC).			
DATE April 30, 2017			
14. 59 MDW PRIMARY POINT OF CONTACT (Last Name, First Name, M.I., email) Kelly, Jason A., jason.a.kelly22.mil@mail.mil			15. DUTY PHONE/PAGER NUMBER 940-782-8983
16. AUTHORSHIP AND CO-AUTHOR(S) List in the order they will appear in the manuscript.			
LAST NAME, FIRST NAME AND M.I.	GRADE/RANK	SQUADRON/GROUP/OFFICE SYMBOL	INSTITUTION (If not 59 MDW)
a. Primary/Corresponding Author Jason A. Kelly	Lt Col	59 TRS	59 MDW
b. John B. Slade	Col (ret)	60 AMDS	60 MDG
c.			
d.			
e.			
17. IS A 502 ISG/JAC ETHICS REVIEW REQUIRED (JER DOD 5500.07-R)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
I CERTIFY ANY HUMAN OR ANIMAL RESEARCH RELATED STUDIES WERE APPROVED AND PERFORMED IN STRICT ACCORDANCE WITH 32 CFR 219, AFMAN 40-401 JP, AND 59 MDWI 41-108. I HAVE READ THE FINAL VERSION OF THE ATTACHED MATERIAL AND CERTIFY THAT IT IS AN ACCURATE MANUSCRIPT FOR PUBLICATION AND/OR PRESENTATION.			
18. AUTHOR'S PRINTED NAME, RANK, GRADE JASON A. KELLY, Lt Col	19. AUTHOR'S SIGNATURE KELLY JASON A. 1234294730 _____		20. DATE March 09, 2017
21. APPROVING AUTHORITY'S PRINTED NAME, RANK, TITLE Michael F. Richards, Colonel, Hyperbaric Medicine Chief	22. APPROVING AUTHORITY'S SIGNATURE RICHARDS MICHAEL F. 1123805593 _____		23. DATE March 10, 2017



PROCESSING OF PROFESSIONAL MEDICAL RESEARCH/TECHNICAL PUBLICATIONS/PRESENTATIONS		
<b>1st ENDORSEMENT (59 MDW/SGVU Use Only)</b>		
TO: Clinical Research Division 59 MDW/CRD Contact 292-7141 for email instructions.	24. DATE RECEIVED April 07, 2017	25. ASSIGNED PROCESSING REQUEST FILE NUMBER 17182
26. DATE REVIEWED April 25, 2017		27. DATE FORWARDED TO 502 ISGJAC
28. AUTHOR CONTACTED FOR RECOMMENDED OR NECESSARY CHANGES: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES If yes, give date. _____ <input type="checkbox"/> N/A		
29. COMMENTS <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> DISAPPROVED Single subject case study with appropriate disclaimers. Approved		
30. PRINTED NAME, RANK/GRADE, TITLE OF REVIEWER Kevin Kupferer/GS13/Human Research Subject Protection Expert		31. REVIEWER SIGNATURE KUPFERER KEVIN R. 1088887370 <small>Digitally signed by Kevin R. Kupferer, DN: cn=Kevin R. Kupferer, o=59th Medical Group, ou=US Army, email=kupferer.kevin@us.army.mil, c=US</small>
		32. DATE April 25, 2017
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33. DATE RECEIVED		34. DATE FORWARDED TO 59 MDWPA
35. COMMENTS <input type="checkbox"/> APPROVED (In compliance with security and policy review directives.) <input type="checkbox"/> DISAPPROVED		
36. PRINTED NAME, RANK/GRADE, TITLE OF REVIEWER		37. REVIEWER SIGNATURE
		38. DATE
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41. COMMENTS <input checked="" type="checkbox"/> APPROVED (In compliance with security and policy review directives.) <input type="checkbox"/> DISAPPROVED The presentation is approved and cleared for public release as a presentation and abstract by Public Affairs, not as a poster since no poster was provided.		
42. PRINTED NAME, RANK/GRADE, TITLE OF REVIEWER Kevin Imuma, SSgt/E-5, 59 MDW Public Affairs		43. REVIEWER SIGNATURE <small>Digitally signed by Kevin Imuma, DN: cn=Kevin Imuma, o=59th Medical Group, ou=US Army, email=imuma.kevin@us.army.mil, c=US</small>
		44. DATE April 26, 2017
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45. DATE RECEIVED		46. SENIOR AUTHOR NOTIFIED BY PHONE OF APPROVAL OR DISAPPROVAL <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> COULD NOT BE REACHED <input type="checkbox"/> LEFT MESSAGE
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		50. DATE



# **Improved Homonymous Hemianopia with Hyperbaric Oxygen Therapy**

## **Introduction/Background**

Homonymous visual-field defects result from insult to the retrochiasmal visual pathway, with 17% - 30% following acute stroke. Any recovery of a complete homonymous hemianopia typically occurs within the first 10 days after the ischemic event and improvement after 10-12 weeks is negligible. Only 38% - 48% of patients demonstrate any measurable improvement. No proven treatment exists for recovery of the impacted visual field.

This is a report of a 69 year old male hospitalized for 8 weeks with septic shock. He was discharged as a quadruple amputee due to necrotizing fasciitis and pressor-induced ischemia. On the day of admission the patient experienced cardiac arrest for approximately 15 minutes and was subsequently noted to have large areas of ischemic change in the occipital and parietal lobes bilaterally. Following discharge a complete left homonymous hemianopia was noted and approximately 5 months after initial insult hyperbaric oxygen treatments were initiated.

## **Materials and Methods**

The patient underwent 61 hyperbaric oxygen treatments in a multiplace chamber at 2.0 ATA for 90 minutes each. Visual field testing was performed by Humphrey Visual Field analysis. Baseline testing was performed, then after treatments 13, 31, 46, and 58 and again 6 months after treatment.

## **Results**

No significant improvement in the visual fields was noted at 13 treatments, but approximately 50% improvement was demonstrated in the right eye after 30 treatments with less improvement in the left. Continued improvement was noted after 46 treatments and plateau by 58 treatments.

## **Summary/Conclusions**

This case demonstrates significant objective improvement of a fixed neurologic deficit following an ischemic brain injury. Various hypotheses exist regarding the recovery of neurologic deficits to include collateral flow mechanisms, the zone of penumbra effect and reactivation of reversibly damaged nerve tissue. This case reveals partial recovery of a neurologic deficit through the use of hyperbaric oxygen, more than 5 months after the original insult.

The views expressed are those of the author and do not reflect the official views or policy of the Department of Defense or its Components.